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THE FARM INDEX

ECONOMIC RESEARCH SERVICE □ U.S. DEPARTMENT OF AGRICULTURE □ SEPTEMBER 1966

also in this issue:
Farm Food Marketing Bill
Oil-Rich Export Outlet
Custom-Hire Farm Work



Bypassed by Progress



economic trends

ITEM	UNIT OR BASE PERIOD	'57-'59 AVERAGE	1965		1966		
			YEAR	JULY	MAY	JUNE	JULY
Prices:							
Prices received by farmers	1910-14=100	242	248	253	263	264	267
Crops	1910-14=100	223	232	236	239	241	245
Livestock and products	1910-14=100	258	261	269	284	283	285
Prices paid, interest, taxes and wage rates	1910-14=100	293	321	323	333	333	334
Family living items	1910-14=100	286	306	307	315	314	315
Production items	1910-14=100	262	276	278	283	283	285
Parity ratio		83	77	78	79	79	80
Wholesale prices, all commodities	1957-59=100	—	102.5	102.9	105.6	105.7	106.4
Commodities other than farm and food	1957-59=100	—	102.5	102.5	104.7	104.9	105.1
Farm products	1957-59=100	—	98.4	100.0	104.5	104.2	107.6
Food, processed	1957-59=100	—	105.1	106.6	110.5	110.6	111.7
Consumer price index, all items	1957-59=100	—	109.9	110.2	112.6	112.9	—
Food	1957-59=100	—	108.8	110.9	113.5	113.9	—
Farm Food Market Basket: ¹							
Retail cost	Dollars	983	1,042	1,072	1,092	1,094	—
Farm value	Dollars	388	409	424	435	436	—
Farm-retail spread	Dollars	595	633	648	657	658	—
Farmers' share of retail cost	Per cent	39	39	40	40	40	—
Farm Income:							
Volume of farm marketings	1957-59=100	—	119	109	89	107	108
Cash receipts from farm marketings	Million dollars	32,247	39,187	2,934	2,763	3,120	3,184
Crops	Million dollars	13,766	17,334	1,201	742	1,129	1,372
Livestock and products	Million dollars	18,481	21,853	1,733	2,021	1,991	1,812
Realized gross income ²	Billion dollars	—	44.9	—	—	48.7	—
Farm production expenses ²	Billion dollars	—	30.7	—	—	32.5	—
Realized net income ²	Billion dollars	—	14.2	—	—	16.2	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	6,229 ³	548	550	551	—
Agricultural imports	Million dollars	3,977	4,088 ³	261	358	387	—
Land Values:							
Average value per acre	1957-59=100	—	139	139 ⁴	150 ⁴	—	—
Total value of farm real estate	Billion dollars	—	159.4	159.4 ⁴	171.1 ⁴	—	—
Gross National Product: ²							
Consumption ²	Billion dollars	457.3	681.2	—	—	732.3	—
Investment ²	Billion dollars	294.2	431.5	—	—	460.1	—
Government expenditures ²	Billion dollars	68.0	106.6	—	—	118.5	—
Net exports ²	Billion dollars	92.4	132.2	—	—	149.0	—
	Billion dollars	2.7	7.0	—	—	4.7	—
Income and Spending: ⁵							
Personal income, annual rate	Billion dollars	365.3	535.1	535.4	573.0	577.2	579.7
Total retail sales, monthly rate	Million dollars	17,098	23,662	23,668	24,475	25,359	25,507
Retail sales of food group, monthly rate	Million dollars	4,160	5,577	5,546	5,931	5,997	—
Employment and Wages: ⁵							
Total civilian employment	Millions	64.9	72.2	72.8	73.2	74.0	74.1
Agricultural	Millions	6.0	4.6	4.7	4.1	4.2	4.1
Rate of unemployment	Per cent	5.5	4.6	4.5	4.0	4.0	4.1
Workweek in manufacturing	Hours	39.8	41.2	40.9	41.4	41.3	41.2
Hourly earnings in manufacturing, unadjusted	Dollars	2.12	2.61	2.61	2.70	2.71	2.70
Industrial Production: ⁵							
	1957-59=100	—	143	144	155	156	158
Manufacturers' Shipments and Inventories: ⁵							
Total shipments, monthly rate	Million dollars	28,745	40,279	41,452	44,071	44,000	—
Total inventories, book value end of month	Million dollars	51,549	68,015	65,394	71,103	71,994	—
Total new orders, monthly rate	Million dollars	28,365	41,023	41,846	45,321	45,482	—

¹ Average annual quantities of farm food products purchased by urban wage-earner and clerical-worker households (including those of single workers living alone) in 1960-61—estimated monthly. ² Annual rates seasonally adjusted second quarter. ³ Preliminary. ⁴ As of March 1. ⁵ Seasonally adjusted.

Sources: U.S. Dept. of Agriculture (Farm Income Situation, Marketing and

Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Dept. of Commerce (Current Industrial Reports, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Dept. of Labor (The Labor Force and Wholesale Price Index).

THE AGRICULTURAL OUTLOOK

Hot weather in late June and July, with short moisture from Kansas and Oklahoma eastward through the Ohio River Valley and most of the Atlantic Seaboard, reduced overall crop prospects. Although production of early harvested small grains exceeded earlier expectations, prospects were reduced for most late-maturing crops. However, August rainfall was more favorable.

COMMODITY HIGHLIGHTS

The 1966 **feed grain** crop, as indicated on August 1, totaled 151 million tons, 10 million below the big 1965 crop, but 4 million more than the 1960-64 average. But supplies of each of the four feed grains in 1966/67 are expected to be below a year earlier and below average. The record 1965 crop was not sufficient to meet total feed grain requirements in 1965/66 and substantial quantities of government stocks were moved into domestic use, export and privately owned stocks. Considerably less government feed grains are available in 1966/67 than in 1965/66.

The acreage allotment for the 1967 **wheat** crop—the bulk of which will be planted this fall—has been increased to a total of 68.2 million acres. This is about 32 per cent larger than the 1966 allotment and represents a return to the allotment levels of the early 1950s. The potentially larger crop from this acreage will provide additional wheat for export and carryover. The carryover for July 1967 is now projected at about 375 to 400 million bushels as compared with the 536 million bushels estimated for July 1, 1966.

As of August 1, the 1966 upland **cotton** crop was estimated at 10.7 million bales, about 28 per cent below last year's crop. Plantings this year are at the lowest level in nearly 100 years, due to grower participation in the 1966 Upland Cotton Program, but a new record-high national average yield is in prospect. Under the 1966 program, growers could divert up to 35 per cent

of their farm allotment and many producers chose to do just that.

Based on the indicated production and combined domestic use and exports of around 15 million bales, a reduction of around 4 million bales is expected in cotton stocks during the 1966/67 crop year. The August 1, 1966, carry-over was at a record level of around 16½ million bales.

Supplies of most fresh deciduous **fruits** are expected to be moderately smaller during the late summer and early fall than a year ago. Apple and grape supplies are expected to be below year-earlier levels this fall though seasonally heavy. The big exception to the general rule for fresh fruits: pears. Supplies will be up substantially as the crop may be 15 per cent above average and almost 50 per cent above last year.

Total supplies of canned deciduous fruits and citrus products (except frozen orange concentrate) will likely be above a year ago because of larger packs of three important canned items—pears, peaches and fruit cocktail. Smaller packs of dried prunes and raisins are in prospect. With the condition of citrus crops in all producing states continuing generally good, increased supplies of fresh and processed citrus in the 1966/67 season are indicated.

July **milk** production continued 3 per cent below a year earlier as hot dry weather in July held pasture conditions to the lowest level since 1954. But compared with a year earlier, output per cow increased 3 per cent for the second consecutive month. June 1 milk cow numbers were reported 6 per cent below a year earlier, the largest decline of record.

Milk/feed and milk/livestock price ratios have risen sharply from a year earlier and are likely to remain favorable to milk production in the coming months.

Based on June 1 milk cow numbers (usually near the average for the year) production for calendar 1966 ~~may~~ total between 120.5 billion

and 121.5 billion pounds, depending on 1966 gains in output per cow. This compares with 125.1 billion pounds of milk in 1965 and the record 127.0 billion in 1964. For January-July, output per cow rose 1.5 per cent from a year earlier; but in June and July, output was up 3 per cent—about the 10-year average gain.

July prices received by farmers for all wholesale milk were up 7 per cent from June and 16 per cent from a year earlier. Some seasonal rises are likely until the fourth quarter peak—usually in November.

Prices of U.S. shorn wool have risen sharply in 1966 and for the year likely will average about 9 per cent above the 1965 national average price of 47.1 cents a pound, grease basis. Producers of the finer grades of wool benefitted most during the first part of 1966 as price differentials among grades widened. Domestic wool price movements were in line with the increase in world prices that began in mid-1965 and widening grade differentials in world markets. In June 1966, the average price of all New Zealand and Australian combing wools was 15 per cent above a year earlier. During late 1966 and early 1967 prices are expected to increase slightly from current levels.

Supplies of wool in the world during the current season are off slightly as a result of shrunken stocks; production likely will remain stable. U.S. shorn wool production in 1966 is down 1 per cent from 1965—up slightly in the 11 western states, Texas and South Dakota; down 5 per cent in the fleece-wool states. World wool consumption increased sharply in the first quarter of 1966 compared with a year earlier and is still running well above the world level of wool production. In the United States, apparel wool consumption during January-April 1966 was up 15 per cent. Consumption of carpet wool remained stable.

U.S. sheep producers will vote this month on a proposed agreement with the American Sheep Producers Council—the fourth agreement as authorized by the National Wool Act of 1954. The proposed agreement provides for producer contributions on 1966-69 marketings of up to 1.5 cents a pound on shorn wool and up to 7.5

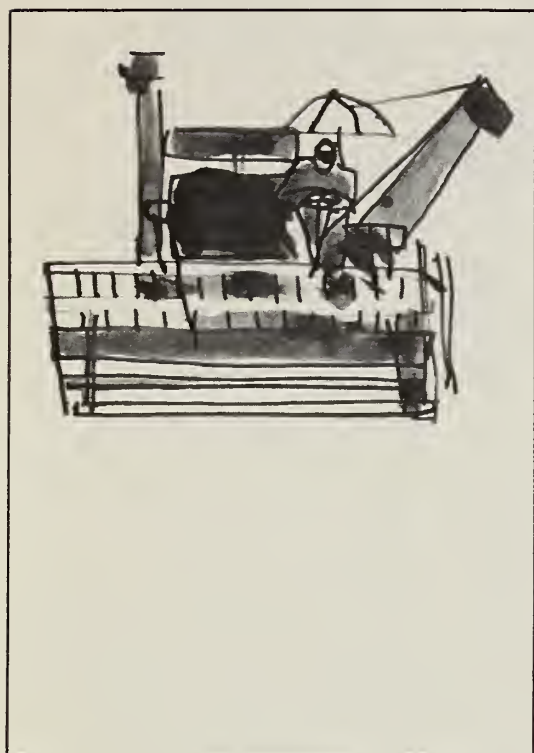
cents a hundredweight on unshorn lambs. These contributions finance the Council's advertising and promotion activities on wool and lamb. Ballots are to be returned to county Agricultural Stabilization and Conservation Offices not later than September 23.

The nation's laying flock during the first seven months of 1966 was smaller and less productive than during January-July 1965. Egg production fell to 105 million cases, 1½ per cent below the same period a year earlier. Demand was strong and prices to producers averaged 37.5 cents a dozen, 6.1 cents above January-Aug. 1965. However, egg production is expected to surpass the 1965 level by fall. Producers are rebuilding laying flocks and rate of lay will resume its uptrend. Consequently, egg prices late this year and early next year are expected to average below a year earlier.

Broiler production through July ran 7 to 8 per cent above the same 1965 period. But exceptionally strong demand for high protein foods generally, together with the tight supply situation for pork, kept prices to broiler producers above year-earlier levels. August prices averaged 15.5 cents a pound, 0.3 cent above Aug. 1965. Broiler supplies are dropping seasonally, but are expected to continue much above 1965 levels during the rest of the year. During the same period, competition from expanding supplies of pork and eggs will become more intense. Hence, broiler prices by fall are expected to average below August levels and close to a year earlier.

Farm turkey prices declined from 24.2 cents a pound in January-April to 22.4 cents in May-Aug. owing to large and seasonally increasing production. Producers are raising about 11 per cent more turkeys this year than the 105 million birds of 1965. Much of the increase in this year's crop has already gone to market and cold storage holdings are building up. More turkeys than in 1965 will be available for Thanksgiving and Christmas. The larger supplies are expected to keep farm turkey prices during the main marketing season this fall close to the 22.2 cents a pound received in Sept.-Dec. 1965.

Farmer Can Cut Overhead Expenses By Custom Hire and Exchange Work



Ever hear of a farm without equipment? It's possible — by renting or custom hiring machinery.

Custom hire of farm implements and operators is just one of several ways in which farmers can cut equipment cost. Another is exchange work where each farmer in an area owns one or more pieces of equipment and shares them with other operators in exchange for the use of their machinery. Renting is still another cost-cutting way, although it is not being used extensively.

Farmers use custom and exchange work for about 30 per cent of their operations. The average varies depending upon type of equipment. In 1964 custom and exchange combining accounted for 28 per cent of the 153 million acres of grain harvested. Percentages for individual operations were: combining wheat, 29 per cent; field shelling of corn, 34 per cent; baling hay, 28 per cent; harvesting silage, 27 per cent; and grinding feed, 57 per cent.

Shipping the products to market or to off-farm storage often

requires heavier equipment than is needed for regular on-the-farm duties. Many farmers hire trucks for the heavy loads and long hauls. In 1964, 52 per cent of farm products were custom hauled, varying widely among states—from 15 per cent in North Dakota to 75 per cent in Wisconsin where nearly all milk is custom hauled.

At the other extreme, custom and exchange work accounted for only 4 per cent of total plowing, planting and drilling and 2 per cent of disking and harrowing operations. Although the extent of hiring these operations has been relatively small in the past, the increasing size and cost of equipment is creating more interest in custom and exchange work.

Through custom and exchange work, farmers can extend the use of machines and afford to use newer and larger equipment. As popular as the system is, more farmers would use it if they could be assured of a machine and operator when needed. (1)

Reduced Tillage Good for the Crop? Argument Goes Pro and Con Practice

Three times across the field. Then planting, followed by another three sweeps at the field before the corn or soybeans are ready for harvest.

Thus goes the conventional tillage program. It may go too far, according to recent studies of the costs and effects of tillage practices.

Not only is tillage a costly part of the farm operation—in terms of labor, power and machinery used in grain production—but excessive tillage may well lower yields and damage soil.

A system of reduced tillage can cut down on the peak work load, increasing the productive capacity of the farm labor force.

The case for a reduced program of tillage goes like this:

—Reduced tillage between the

rows for corn slows down weeds while providing a more favorable medium for corn to spread its roots.

—It increases the capacity of the soil to hold water by leaving a rougher surface, a surface which also helps combat erosion.

—By eliminating some trips across the field with heavy machinery, the practice reduces the danger of compacted soil.

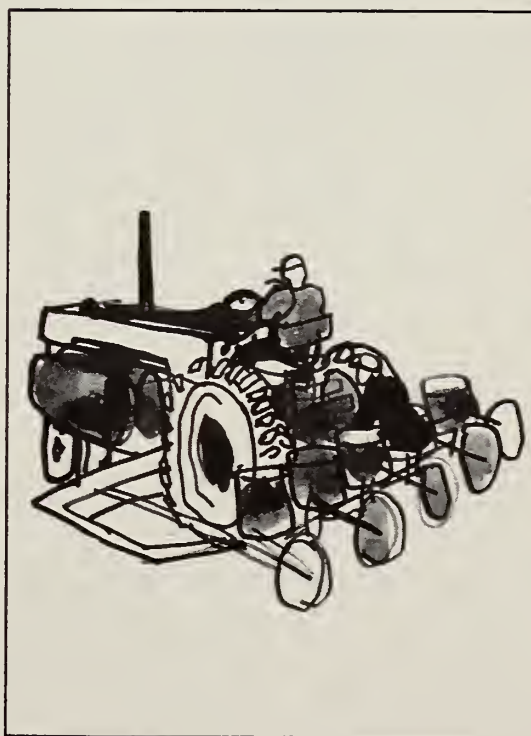
The argument against reduced tillage stresses these points:

—Most of the systems of reduced tillage now used in the Corn Belt either combine operations or use a machine calling for a large tractor. The result often is a tractor with excessive capacity for every other operation on the farm.

—Since the practice may call for two- or four-row equipment, the farmer may not be able to get the job done when he ought to.

—A reduced tillage system demands a high degree of skill from the farmer. Even a single trip over a field with a rotary tiller may result in excessive tillage, needless cost and damaged soil if the machine is used improperly.

—Rotary tillage in a reduced system may complicate work with crop residues, fertilizers and pesticides. (2)



This is ERS . . .

This is the sixth in a series of articles on the seven divisions that make up the Economic Research Service. The series highlights the research studies and findings that help to answer the perennial ifs in American agriculture.

ECONOMIC AND STATISTICAL ANALYSIS

What shape is American agriculture in today? How much money are farmers getting for what they grow? How much do they get for cooperating in government programs?

How much money has to be spent to run our farms and ranches? How much income do farmers have left over after paying production expenses? How much is this in total—how much per farm—how much for big farmers compared with small ones?

Will next year be a better or worse year than this for wheat, beef cattle, dairy products and cotton?

What will U.S. agriculture look like 10, 15 or 20 years from now, based on apparent trends in prices, technology, our own domestic needs and export markets?

Many groups need answers to these and similar questions—Congress and other government officials in planning future farm programs; farmers themselves in deciding what or what not to produce; food manufacturers in choosing what to process; retail stores in selecting what to stock.

Providing the answers and keeping these answers updated is one task of ERS's Economic and Statistical Analysis Division (ESAD).

Typical of the in-depth analysis needed is an ESAD study of the ability of U.S. farmers to grow more food to help feed more people abroad under our foreign aid programs. Developing countries with fast-growing populations are going to need food aid for a while until they can more fully develop

their own agriculture or industry. But does the United States have the potential to produce the needed food?

Economists first looked at the cropland acreage the U.S. now cultivates, plus the cropland in fallow. They also considered the

cropland now diverted from production under government programs that could be put back under the plow.

Given these factors, economists could determine how much wheat, rice, corn, sorghum, barley and other grains our farmers would likely produce by 1970 and by 1980—if the market price of each gave them an income equal to that earned in 1965.

With production thus projected, economists could then estimate how much wheat, rice and so on the U.S. would use and how much would be needed for commercial exports. What's left over becomes available for food aid and for necessary carryover stocks.

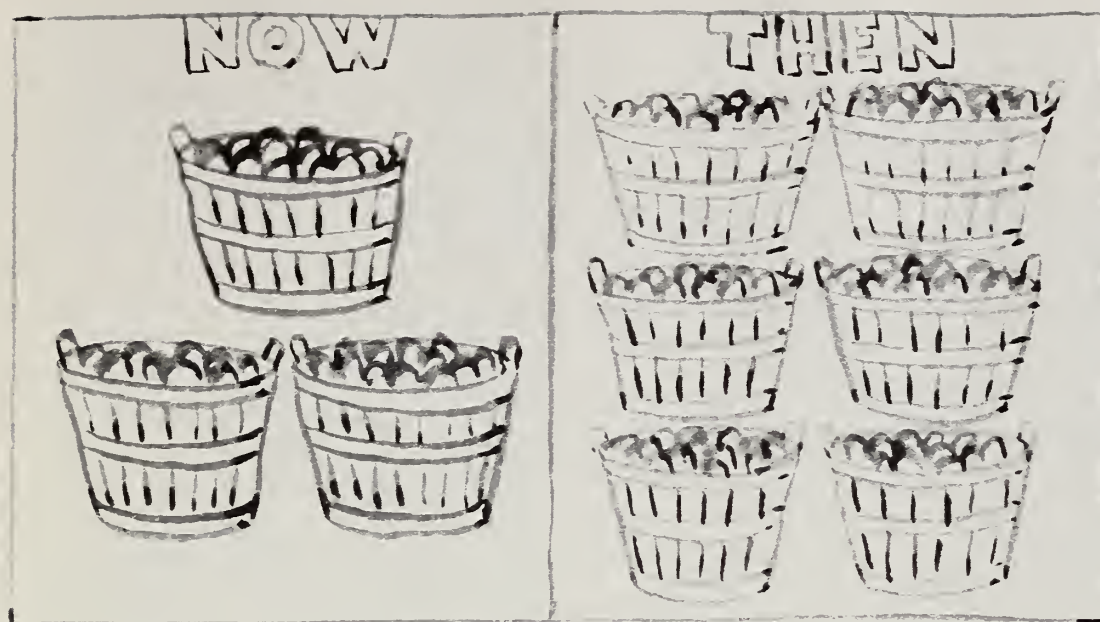
The future food aid needs of the developing countries were estimated assuming some improvement in diets but also that future rates of growth in production are about the same as the rates in the recent past.

Preliminary results show that the United States, on present cropland acreage, should be able to produce about *twice* the needs for food aid of the developing countries by 1970. But by 1980 their needs will be much higher.

The implication of the study is clear: Higher food output coupled possibly with planned population growth in the developing countries themselves are needed to eliminate or at least drastically reduce the need for food aid. The role of the United States and other developed nations here is to help provide the necessary technology, know-how and financial assistance.



COMMODITY ANALYSIS



OUTLOOK & PROJECTIONS

This is one of the studies conducted under the Division's responsibility *to appraise the long-run outlook for farm production and prices, to forecast the demand for farm products and to analyze food consumption trends.*

Essentially, this research area covers the broad spectrum of the national economy in order to assess the impact of change on agriculture.

For example, economists analyze the effect of income and excise tax cuts, changes in the federal budget, ups or downs in new home construction, stepped up or reduced capital outlays by heavy industry in new plant and equipment.

All these factors have a bearing on what happens in the agricultural economy. And with these pinned down, specialists can then answer many questions vital to farmers:

How fast will markets for U.S. farm products grow in the next few months? Next year? Five, 10 or 20 years hence?

Are farm prices likely to trend up or down? Which foods will people prefer in the years ahead? How much will the school lunch, food stamp and related distribution programs improve the nutrition of needy people and raise the nation's total use of

food?

Each answer, provided by ESAD, is the basis for a policy decision, whether by government, by the food industry or by the individual farmer.

The Economic and Statistical Analysis Division has three other major research responsibilities:

Commodity situation and outlook. U.S. farmers grow almost everything that will grow in a temperate climate, from rapeseed and popcorn to naval stores—rosin and turpentine. But the farm economy is largely built on such major commodities as wheat, corn, soybeans, cotton and livestock.

How large the crop, how stable or varied the price, how strong or weak the markets both here and abroad—such factors determine what income farmers get, what price consumers pay, what quantities of food and fiber we have available to sell abroad, what quantities we can ship abroad as aid.

All these factors, for this year, last year and years past, are constantly being analyzed in ESAD's commodity situation and outlook work. What emerges is a set of barometers sensitive to the many nuances of change in the nation's farm and general economy. These "situation" reports, some pub-

lished monthly, some quarterly, tell at a glance what the outlook is in coming months for each of the key commodities.

Economists working in this research area also seek answers for Congress and administration officials on the cost and probable success of new legislation to help one or more groups of farmers.

Take cotton producers, for instance. Cotton returns more money to farmers than any other U.S. farm product. But cotton in recent years has been up against stiff competition in this country from manmade fibers, in foreign markets from cotton grown in other exporting countries. When unsold cotton backs up in U.S.



FARM INCOME

warehouses, producers feel the pinch.

ESAD specialists recently calculated answers to a number of pertinent questions: What would happen to farm income if a new program reduced cotton acreage and production? What kind of government supports would be needed? What would be the short- and long-term impact on foreign sales? How could cotton better compete with synthetics?

Subsequently, Congress passed legislation designed to help solve economic problems for cotton farmers.

Farm income. Will farm income be up or down this year?



AGRICULTURAL HISTORY

The question rebounds throughout the rural economy and in urban centers, too. Bankers who serve farmers ask if times will be good. Farm machinery dealers wonder if farmers will be buying or only looking. And of course, farmers have the most direct interest in what price their crops will probably bring and what their net incomes will be.

The probable answers come from the Economic and Statistical Analysis Division. Four times a year, in the *Farm Income Situation*, ESAD estimates the cash receipts from farm marketings. This is done by month—by state—by commodity.

But marketings alone don't indicate actual income. Added to them must be government payments to farmers who sign up under one or another of the commodity programs, the value of home-grown foods used on farms and the rental value of farm dwellings. The total is gross farm income. Deducting from this the cost of things that farmers must buy to run their farms, economists are able to estimate net income.

Research on farm income also includes setting up formulas that show how agriculture affects jobs and income in other parts of the national economy. Say, for example, that ranchers produce a lot more cattle for slaughter this year. More cattle means more steel for fencing, more petroleum for the trucks to haul the animals to markets and, ultimately, more business for these nonfarm industries.

Agricultural history. Whatever the field of endeavor, we learn from past successes—and past mistakes. Agriculture is no exception, as members of Congress and others in government and industry recognize.

This fourth and last of ESAD's research areas looks back at the many-sided development of American agriculture in order to help planners look ahead.

How have our past farm support programs worked? What about the wheat program? To provide background for new policy decisions, ESAD historians have traced the major provisions and detailed variations in the government's price support programs for wheat enacted since the mid-1930s.

Historical research delves, too, into our foreign experience in agriculture through the years. One study follows the course of our technical assistance programs which began not after World War II, as is often thought, but shortly after Commodore Perry opened Japan to western commerce in the 1860s. The Japanese asked U.S. farm experts to help them colonize Hokkaido, their northernmost island. This was the start of an aid program which, as Division historians show, has contributed to farm progress throughout the world.

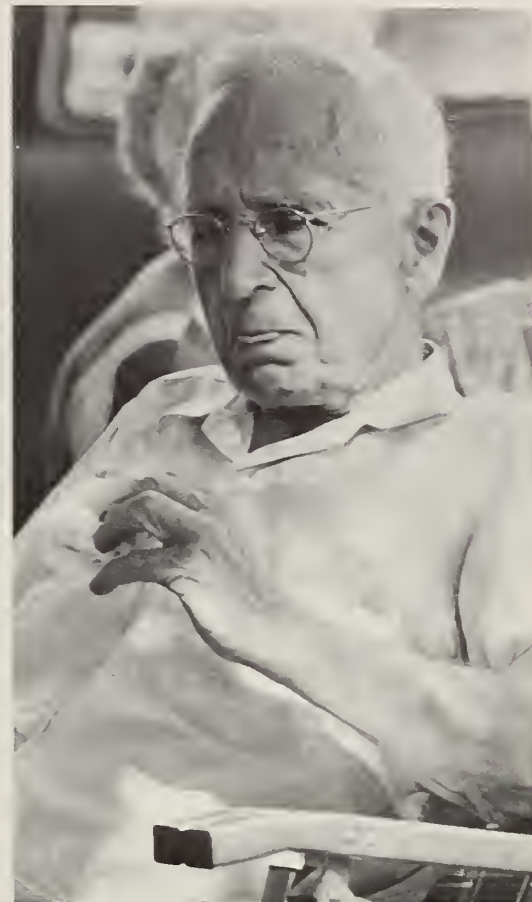
Finally, ESAD records the history of the Department of Agriculture itself. Its first hundred years were chronicled in *Century of Progress*, a book that was published to commemorate the Department's centennial celebration which took place in 1962.

Fundamentally, then, the task of the Economic and Statistical Analysis Division is to provide economic intelligence that enables American agriculture and government to make the best possible judgments about our future food needs and our ability to meet them.

Economic intelligence starts with numbers, thousands of them, on population, farm commodity prices, income, food production and consumption and a host of other indicators.

But numbers in themselves have little value. How they are interpreted by ESAD specialists is what turns them into meaningful intelligence.

Even in the nuclear—and computer—age it takes man to make statistics make sense. (3)



Prosperity has touched many rural Americans, evaded others. In 1960 there were nearly 18.7 million rural people whose family incomes fell below the \$3,000 poverty line, several million more working below their income potential.

As the United States has grown in prosperity, so, too, has much of rural America. Between 1950 and 1960 the median annual income of rural families nearly doubled, rising from \$2,225 to \$4,382.

But there were still large numbers of rural people in 1960 not sharing in the nation's progress. These were the 18.7 million people whose annual family incomes fell below the poverty line of \$3,000. And there were several million others who, though not poor according to the technical definition, were working below their personal income or employment potential.

Who were they, these rural people in poverty or problem situations? Many of them were the hired farmworkers, the elderly and the members of certain racial minorities.

Hired farmworkers. This group has for years been near the bottom of the economic ladder in the U.S. Handicapped by low wages and high rates of unemployment, median family income for the 2.6 million families in this group was

only \$2,600 in 1962. In the poverty category were nearly half the white farmworker households, five-sixths of the nonwhite and 71 per cent of the households (white and nonwhite) who did some migratory work.

Even though a substantial proportion of farm wage workers do receive some benefits from their employers—such as housing, meals, transportation or use of garden plot—the dollar value of these items generally does not equal the health and unemployment insurance, paid vacations, sick leave and other fringe benefits received by industrial workers.

The elderly. In 1960 there were some 16 million Americans 65 or older. Nearly 5 million of these older citizens lived in rural America.

From an income standpoint, the rural old folks were generally worse off than their urban counterparts. The median income in 1959 of families headed by persons 65 years old and over was only three-fifths as high in rural

Bypassed by Progress

areas (\$2,218) as in cities (\$3,766). More of the older rural families owned their own homes but only about half of them had housing that was considered sound and equipped with all plumbing facilities in 1960, compared with 70 per cent of the urban households.

The psychological problems which frequently accompany retirement—the feelings of loneliness, dependency and boredom—were especially acute for rural people. Normal outlets for enjoyable and worthwhile use of leisure were limited outside of towns and cities. Also, the sparseness of population in rural areas limited the amount and quality of community medical and social services for the elderly.

Minority groups. Negroes made up just about 10 per cent of the total U.S. population in 1960 and, as such, formed our nation's larg-

est racial minority. But heavy off-farm migration of Negroes—particularly since World War II—has reduced the Negro population in rural America to about 5.1 million persons, nearly all of whom live in the South.

The economic position of the rural Negro has long been poor. The median family income for rural Negroes in 14 southern states was less than \$1,500 in 1959. Only one-fifth of the young men 25 to 29 years old had completed high school. And less than 15 per cent of the rural houses occupied by Negroes had hot and cold piped water.

The 725,000 Spanish-speaking rural residents of the Southwest are another major minority group whose economic position is poor. Median family incomes for this group were below \$3,000 in 1959 in the five southwestern states as a group—Arizona, California, Colorado, New Mexico and Texas.

The educational achievements of the rural Spanish-speaking population lagged far behind the national average. For example, nonfarm rural males 14 years of age or older still averaged only five years of schooling in Texas, compared with nine years for the total U.S. nonfarm population.

The American Indian population numbered nearly 550,000 in 1960 (excluding some 30,000 Eskimos and Aleuts living in Alaska). Seventy per cent of the Indian population still lives in rural America. Most rural Indians—especially those on reservations—live in poverty. In 1959, just about five of every eight rural Indian families had incomes below the \$3,000 poverty line.

A recent study showed that a large majority of Indian families live in housing below the minimum standards of comfort and safety. Dwellings often have no nearby water supply; no sanitary facilities; no safe or adequate means of heating; no electricity; often no flooring except the bare earth. (4)

Illinois Farmers Favor Land, Other Physical Assets Over Stocks, Bonds

Just as businessmen have reached success by plowing profits back into the business, the forward-looking farm operator invests his profits in physical assets.

A major aim of a recent survey of well-to-do central Illinois farmers was to see how they make use of their holdings.

These cash-grain producers, particularly the young farmers, keep most of their assets in tangible form, such as land, buildings, livestock, machinery and crops.

Financial assets like bank accounts, bonds and industrial stocks tend to be a very small part of the balance sheet.

Farmland and buildings account for more than half the average operator's assets. Livestock, machinery and crops bring the total up to 80 per cent of his worth.

The rest of the assets are tied up in land rented to others, life insurance, nonfarm real estate, stocks and bonds, in that order.

The survey also underlined the point that the older an operator is, the more money he has invested in his farm.

A parallel condition is that debts tend to go down as age goes up. Farmers under 40 have one dollar of debt for every three dollars of assets. Farmers over 60 have debts equal to only 5 per cent of their assets.

The farm operators of the area have two main sources of cash for current expenses: crop sales and loans.

Older farmers generally use crop sales to meet those expenses; the under-40 operators often go into debt to pay bills.

Younger operators also tend to use nonfarm income to build up an investment in the farm. Among older families, this nonfarm money goes towards things like luxury appliances, vacations or children's education. (6)

The Rural Box

Most of the heads of poor rural families are able-bodied men. Some, especially the younger ones, can be trained and can move to jobs wherever available.

But those over 45 years of age—who comprise about half the family heads—have only limited potential for retraining and migration. These men, and their families, are frequently termed "boxed-in" rural residents.

On the basis of 1959 data, it was estimated that 2.8 million low-income rural family heads were boxed-in; 1.7 million were not. About 1.8 million of the first group were nonfarm rural residents; 1 million were farm people.

In 1964 Congress passed the Economic Opportunity Act which provided grants up to \$1,500 per family to help this group boost incomes. These grants can be used to (1) acquire or improve real estate or reduce mortgage indebtedness, (2) operate or improve the operation of a farm, (3) participate in cooperative associations, and (4) finance non-agricultural enterprises. Loans up to \$2,500 per family are also available for financing nonfarm businesses. (5)



THE BILL FOR MARKETING FARM FOOD

Consumer expenditures on farm foods between 1955 and 1965 have increased 46 per cent, going from \$53 billion a year to about \$78 billion. Marketing agencies received 72 per cent of the total increase, or \$18 billion; the increase in returns to farmers amounted to \$7 billion.

Last year it cost the nation \$52 billion to get its food supply from farm to consumer. The figure—the bill for marketing farm food products—was 2 per cent or \$1 billion above the 1964 level.

Food processors accounted for \$19 billion, or 39 per cent of the total marketing bill in 1963, the most recent year for a breakdown of the overall figures for the different agencies of the food marketing system.

Retail stores received about \$12

billion out of the total bill and eating places received another \$10 billion. The remaining \$8 billion went to firms that assemble, transport and wholesale our farm food supplies.

The 2 per cent increase in the marketing bill for 1965 was considerably less than the average increase during 1955 to 1965.

The returns to farmers for the equivalent farm products were up \$2 billion from 1964 to about \$26 billion in 1965. Most of the increase was the result of higher prices; roughly 5 per cent was caused by the larger volume of products sold.

About 22 per cent of the increase in the total marketing bill resulted from the larger volume of food traveling through the marketing system. The remain-

ing 78 per cent of the increase was caused by the increase in marketing charges per unit of product.

Labor cost. The cost of labor is far and away the biggest part of the total marketing bill. Labor used by assemblers, manufacturers, wholesalers, retailers and eating places cost \$21.9 billion last year, compared with \$21.0 billion in 1964. The figures include the work of supervisors, managers, officers, proprietors and family members as well as production and clerical workers.

Labor costs have not increased as rapidly as other major components of the marketing bill. Labor costs amounted to 42 per cent of the total marketing bill in 1965, 46 per cent in 1955.

While labor costs per hour of work rose 46 per cent between 1955 and 1965, the cost per unit of food marketed climbed only 14 per cent—the result of a steady increase in output per man-hour.

The total number of food marketing workers in 1965 was little different from a decade earlier, with changes taking place within the different segments of the industry just about offsetting each other. Between 1955 and 1965 the number of workers in food processing firms decreased 8 per cent; the drop was 9 per cent for retail food stores. But the number of workers in eating places climbed by 13 per cent and in wholesaling by 9 per cent.

These different rates of growth were largely a function of changes in productivity. Gains in productivity, for example, roughly kept pace with volume marketed by the food processors. In the eating places, on the other hand, the rising volume of food handled, along with increased services per unit of food sold, out-stripped increases in productivity.

Rail and truck transportation. The bill for hauling farm foods by truck and rail represented about 10 per cent of the total marketing bill in 1964, about the same as it was in 1955. (Figures for 1965

are not available.) In dollars, the bill rose from \$3.4 to \$5.1 billion.

Most or all of the increase since 1958 stemmed from the greater volume of goods handled. Since 1958, some of the rail freight rates have declined.

Profits. Profits earned by corporations from handling the products included in the marketing bill amounted to \$2.9 billion (before income taxes) in 1965. It was the third consecutive year they increased \$0.2 billion or more.

Last year corporate profits represented 5.6 per cent of the marketing bill, compared with 4.7 per cent in 1962 and 5.2 per cent in 1955.

After-tax profits in 1965 were about 50 per cent of profits before taxes, 47 per cent in 1962 and 49 per cent in 1955.

Corporate profits have increased over the years as capital investment has grown. For instance, more capital is needed to handle the expanding volume of food, to improve efficiency of operation and to develop and distribute new products. Also, rising prices and wages have added to the need for working capital.

Estimates indicate the total stockholder equity of corporations manufacturing food products in 1963 was 58 per cent greater than in 1957-59. Stockholder equity in the retail food trade was 36 per cent greater.

Other costs. The rest of the marketing bill includes such items as advertising costs, depreciation charges and business taxes other than income taxes—the three most important items among those for which estimates can be made. These three accounted for about 9 per cent of the total marketing bill in 1964.

Depreciation charges make up one of the most rapidly increasing items in the marketing bill. The major cause has been the rapid growth in depreciable items through replacement, extension and modernization of plant and equipment. (7)

Food Men Stick to Food When Dairy, Bakery Shops Add to Size in Merging

Bakery processors are buying more bakeries these days. However, their neighbors the dairy processors are cutting down on their purchases of other dairies.

It's all a matter of which firms are buying up which firms. Or, to put it in the language of the trade, it's a case of integration—vertical, horizontal, or conglomerate.

Between 1959 and 1964, bakeries averaged 22 acquisitions a year, for a total of 132 for the period. This annual rate was nearly half again as big as the average for 1952 to 1958—a shade less than 15 acquisitions a year.

The dairy processors, on the other hand, bought a total of 298 firms between 1959 and 1964—close to 50 firms a year. In the earlier period, the dairy companies had acquired about 54 firms a year.

These figures come from a recent updating of an earlier, more comprehensive study of changing ownership within the food trades.

Technology, the recent study suggests, is prompting the bakers to step up the pace of horizontal integration (processor buys processor, within the bakery industry). The swing to continuous mix processing and freezing bread is bringing greater efficiency to the trade. But such changes also put a premium on lowering unit costs through larger sales.

Thus it's more than likely the company has its eye on the additional sales volume when it buys up a processor in another market.

To illustrate the trend, 55 per cent of all acquisitions by bakery processors were of the horizontal sort in 1952-58; more recently 76 per cent were.

As for the dairy industries, the law, rather than the force of economics, has slowed the rate of horizontal integration. Dairy firms have had to face the reality

of anti-trust legislation in recent years. Any company that wants to expand is more likely to do it by diversifying rather than by taking over a bigger share of its own field.

Thus 85 per cent of the dairy firms' acquisitions were horizontal integration in 1952-58; 68 per cent were in 1959-64.

Neither the dairy processors nor the bakers showed much change in the rate of vertical integration. But all such acquisitions by the bakers went forward—they bought up a bakery wholesaler or retailer. The dairy processors mixed it up a little, with two or three acquisitions backward toward the assembler or the farmer.

When either the dairy processors or the bakers reached outside their own trade for a purchase—conglomerate integration—they usually stayed with foods, most likely candy, snacks or specialty foods such as corn chips, potato chips or nuts.

Even so, one of the bakeries in the study reached beyond the food trades to buy up an advertising firm.

Several of the dairies acquired nonfood firms, including such diverse businesses as cosmetic companies, farm supply houses and even a hotel.

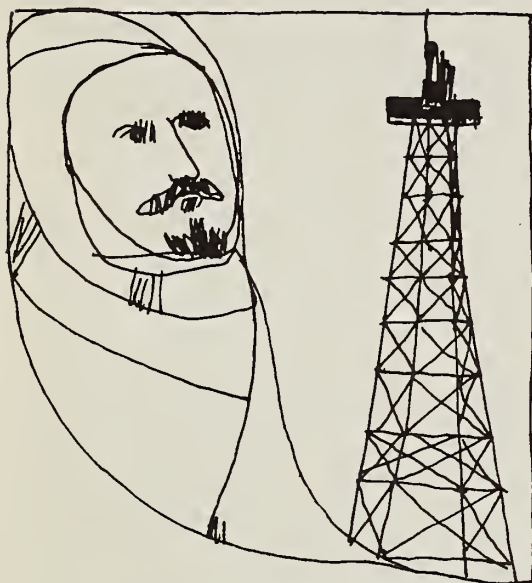
The figures suggest there will be little change in the future from these recent trends—bigger firms, more diversified ones and more establishments within the company. In fact, "bakery" or "dairy" may well become almost meaningless terms in describing the largest companies.

Such expansion will, of necessity, call for more company-wide production schedules, more rigid purchasing specifications. These changes, in turn, will have their own impact on the peripheral industries.

Growers will be almost forced to form increasingly effective organizations to coordinate production activities and sales. (8)

OUR OIL-RICH EXPORT OUTLET

Saudi Arabia—short on food but long on oil—is a good cash customer for farm products. U.S. sales, while still small, are on the rise.



Water-short but oil-rich, Saudi Arabia can at least buy what it can't grow.

With little more than one-tenth of 1 per cent of its total land area cultivable at the present time, Saudi Arabia is sharply deficit in food production. Only one major food crop, dates, is grown in sufficient quantity to meet domestic needs.

Imports comprise a sizable share of the nation's total food supply—representing about one-third of the total since the early 1950s.

Virtually *all* rice, sugar, vegetable oils, preserved and canned foods and tropical beverages such as coffee and fruit juices have to be imported. Large quantities of wheat flour, meat and fresh fruits are also purchased abroad.

But thanks to its oil revenues, Saudi Arabia has more than enough cash on hand to meet all food import needs. The Saudi government even encourages such imports by a free import policy and a subsidy which helps lower the price to consumers on essential imports such as cereals, fats and oils, dairy products, sugar and live animals for food.

As a cash buyer, Saudi Arabia is an attractive market for agricultural exporters. U.S. sales to the kingdom, while still small, have been rising steadily and are projected to increase more by 1975.

In 1962 the United States exported about \$10 million worth of agricultural products to Saudi Arabia. By 1963 we had upped our sales to \$13.5 million, by 1964 to \$14.1 million. The bulk of our exports in 1962-64 consisted almost entirely of two commodities—rice and wheat flour.

Rice, primarily the long grained type, is our No. 1 export to Saudi Arabia. Recent promotional efforts have given a big impetus to our sales by convincing many Saudi buyers that U.S. varieties are similar to preferred types grown in Thailand, Pakistan and Iran.

Saudi Arabia's imports of rice are projected to increase sharply in the next decade as population

climbs and rising per capita incomes swell demand. By 1975 the nation likely will be importing some 144,000 metric tons annually. Our share of this market is projected to rise from about one-third in 1965 to 40 per cent in 1975 as U.S. rice varieties gain in favor.

U.S. wheat flour sales, however, are likely to drop somewhat in the next 10 years. Government development plans are stressing increases in milling and storage capacity. Consequently, increases in wheat grain imports are likely. Saudi Arabia now purchases wheat principally from Canada. The U.S. share of the wheat and flour market on a grain equivalent basis is projected to shrink from about 65 per cent in 1965 to 50 per cent in 1970 and 1975.

Our exports of canned fruits and preparations to Saudi Arabia likely will increase substantially, possibly even five-fold. A lot depends on competition from North Africa. The United States ships mostly concentrated frozen fruit juices. Should some of the North African countries become important exporters of frozen fruit juices, too, we could lose instead of gain in the Saudi market.

The United States has also been selling small quantities of meat, primarily poultry, and canned vegetables to Saudi Arabia. U.S. meat sales are projected to rise from about 900 tons in 1965 to 2,000 tons in 1975. Our canned vegetable exports are projected to increase from about 1,000 tons in 1965 to 1,800 tons in 1975. (9)

U.S. EXPORTS TO SAUDI ARABIA INCREASE AS NATION'S FOOD NEEDS GROW

Commodity	Total imports				Imports from U.S.			
	1961/62	1965 ¹	1970 ²	1975 ²	1961/62	1965 ¹	1970 ²	1975 ²
	1,000 metric tons				1,000 metric tons			
Wheat ³	116	138	156	160	70.7	90.0	78.0	80.0
Rice	100 ⁴	109	127	144	17.2	36.0	44.0	58.0
Barley	27 ⁵	34	64	92	.3	—	—	—
Millet	21	29	37	45	—	—	—	—
Meat	11	20	30	38	.3	.9	1.5	2.0
Canned fruit	4	6	9	11	.9	1.8	2.7	4.5

¹ Estimated. ² Projected. ³ Grain equivalent. ⁴ Average imports 1959/60-1961/62. ⁵ Average imports 1960/61-1961/62.

Drought Adversely Affects '66 Crop Prospects for Western Hemisphere

A decline from last year's record output is the mid-1966 outlook for farm production in the Western Hemisphere.

The impact of drought on U.S. farm production this year may more than offset the record Canadian output in prospect. Drought has also adversely affected output in several areas of Latin America—particularly the Caribbean, Peru and Bolivia.

In the United States, information this August indicated a harvested crop area in 1966 which would be the second smallest in recent years. Reduction in this year's output of wheat, rye, feed grains and dairy products seems likely.

In Canada, however, soil moisture conditions were excellent and the area seeded to grains in the Prairie Provinces was the largest in recent years. Wheat production is estimated near 800 million bushels, compared with the record 1963 harvest of 723.4 million bushels. Marketing and slaughter of livestock was also on the upswing with a record output expected in 1966.

Latin America's farm output this year may be slightly below the record 1965 level.

Caribbean sugar output in 1966 is down from last year, reflecting a sharp drop in Cuba's sugar output. In Mexico, the wheat and corn crops are expected to be

smaller than in 1965 and a slight decline in cotton output is also forecast.

Brazil's 1966 coffee crop is estimated to be 10 per cent smaller than in 1965. Corn output is down 12 per cent from last year; rice, 2 per cent; and dry beans, 25 per cent. Peru's output of livestock and food crops have also been affected by severe drought.

In contrast, Argentina harvested one of its largest corn and sorghum grain crops in 1966. A record area has been seeded to wheat and some recovery is anticipated for output of barley, oats and rye. Also, a rise in Argentine meat output is likely.

This year's prospects for Uruguay's farm production are favorable, too, particularly for meat and wool. (10)

Record Crop Output Likely During '66 For African and West Asian Farmers

1966 promises to be the second record year in a row for farmers in Africa and West Asia—despite adverse weather in parts of the region.

At midyear, most of the 1966 grain crops had been harvested. Early indications point to a wheat harvest in excess of 12 million tons in West Asia, some 600,000 above the region's 10-year production average. Barley output in 1966 is also expected to approximate the 10-year regional average of 5.7 million tons.

Both the wheat and barley crops in Turkey and Iran turned out well in 1966 and possibly will set all-time highs for each country. The Turkish and Iranian output combined to outweigh poor returns in most other countries of West Asia (which starts at Turkey and Cyprus on the west and extends through Iran).

Iraq, Syria, Jordan and Israel have been especially hard hit by dry weather this year. The 1966 combined total for the wheat and barley crops in these countries was less than half the average for the previous five years.

Crop output in the southern portion of Africa during the first half of 1966 has recovered considerably from last year's drought depressed level.

In South Africa, the 1966 corn harvest is estimated at approximately 5 million tons, up substantially from the 4.5-million-ton output of last year but still short of the 6 million tons produced in 1962 and in 1963.

The western portion of northern Africa, however, has experienced widespread drought this year and the harvest of most crops in Morocco, Algeria, Tunisia and Libya is likely to prove smaller than in 1965.

African cotton production, largely in Egypt (UAR) and the Sudan, appears about the same as in 1965—a good crop. Also, Africa's important coffee crop likely will turn out at about 1965's high level of a little over 1 million tons. (11)

Foreign Spotlight

SOVIET UNION. During the first six months of the new five-year plan, inputs supplied to the agricultural sector were up considerably from the same period a year ago. Deliveries of tractors during January-June 1966 were up 19 per cent; trucks, 44 per cent; grain combines, 13 per cent; and mineral fertilizer, 15 per cent over a year earlier.

BRAZIL. Largely because of sharp gains in coffee exports, Brazil's total exports during the first six months of 1966 topped total imports by about \$170 million. An increase of nearly \$90 million in the value of Brazilian coffee exports during January-April 1966 over 1965 was primarily responsible for the favorable trade balance. Other commodities registering significant gains were wool, hides and skins, cocoa beans, rice and sugar. (12)

FERTILIZER USE IN THE UNITED STATES: ITS ECONOMIC POSITION AND OUTLOOK. D. B. Ibach, Farm Production Economics Division. AER-92.

This appraisal of the current and prospective use of fertilizer in the United States is made to meet requests of the fertilizer and related industries and the needs of researchers.

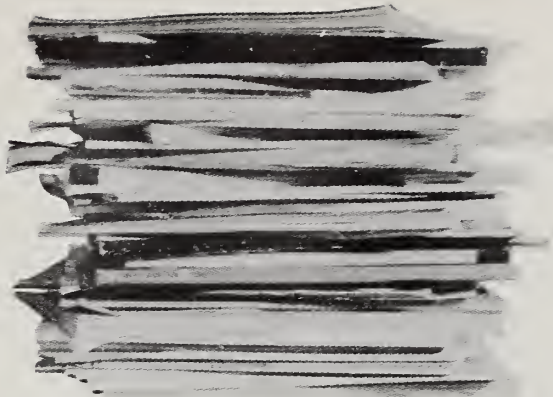
It is a revision of an earlier publication, which was based on estimates of yield response of individual crops to fertilizer associated with levels of crop technology in use about 1950.

AN ANALYSIS OF WOOL MARKET NEWS AND ITS IMPORTANCE TO MARKETING EFFICIENCY. C. A. O'Dell, Marketing Economics Division. AER-89.

Wide distribution of accurate and timely market information is essential to a well-run competitive marketing system.

This study was designed to (1) determine the sources, availability and accuracy of additional spot market information needed to help producers and local buyers in making sound decisions, (2) determine the relationship between Boston quotations and local spot prices and (3) determine the source of variation between these prices in market location and quality.

INFLUENCE OF PACKAGING AND LABELING ON SALES OF INTERIOR FLORIDA GRAPEFRUIT: A SALES TEST. S. E. Brown and E. C. Pape, Marketing Economics



recent publications

The publications listed here are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from The Farm Index, OMS, U.S. Department of Agriculture, Washington, D. C., 20250. State publications may be obtained only by writing to the issuing experiment station or university after the title.

Division. ERS-282.

A 48 per cent increase in sales resulted from packaging grapefruit in polyethylene bags, according to this report of a recently conducted test.

Displays of loose fruit produced sales of 8.3 pounds per 100 customers; the labeled bags were associated with sales of 12.3 pounds of the Marsh seedless fruits.

AN INTERREGIONAL ANALYSIS OF THE FED BEEF ECONOMY. R. A. Dietrich, Marketing Economics Division, and W. F. Williams, Texas Technological College. AER-88.

This report confirms the widely accepted opinion that location and transportation costs are important in determining competitive market power in inter-regional beef trading.

DRYING SHELLLED CORN. V. W. Davis, Farm Production Economics Division and H. H. Beaty and G. C. Shove, Illinois Agricultural Experiment Station, Urbana. Ill. Agr. Expt. Sta. Bul. 916.

The purpose of this illustrated circular is to serve as a guide for evaluating some of the factors involved in selecting and operating a grain dryer.

EFFECTS OF COTTON PRICE AND ALLOTMENT VARIATIONS ON FARM ORGANIZATIONS AND INCOMES, EASTERN PIEDMONT AND UPPER COASTAL PLAIN (ECONOMIC AREAS SIX AND E), NORTH CAROLINA. J. G. Sutherland, North Carolina Agricultural Experiment Station, Raleigh. N.C. Agr. Expt. Sta. A. E. Ser 126.

As a part of an economic appraisal of farming adjustment opportunities in the Southern Region to meet changing conditions, this study used linear programming to arrive at the most profitable combinations and sizes of enterprises.

Numbers in parentheses at end of stories refer to sources listed below:

1. P. E. Strickler, H. V. Smith and W. H. Walther, Uses of Agricultural Machinery in 1964: Custom and Exchange Work—Machine Rental, Stat. Bul. 377 (P); 2. D. A. Holler and R. N. Van Arsdall (SM); 3. J. P. Cavin (SM); 4. & 5. Economic Development Division, Rural People in the American Economy, AER (M); 6. J. Curnutt and R. Ferber, Financial Stock-Flow Relationships Among Central Illinois Farmers, Univ. of Illinois Studies in Consumer Savings No. 5 (P*); 7. Marketing and Transportation Situation, MTS-162 (P); 8. E. A. Cohn and L. N. Crutchfield, Ownership Changes Made By Bakery and Dairy Producer Companies, 1959-64, ERS-291 (P); 9. L. E. Moe, Saudi Arabia—Supply and Demand Projections for Farm Products

to 1975 With Implications for U.S. Exports, ERS-For. 168 (M); 10. Western Hemisphere Branch, Western Hemisphere Agricultural Situation: Midyear Review, ERS-For. 163 (P); 11. Africa and Middle East Branch, Africa and West Asia Agricultural Situation: Midyear Review, ERS-For. 164 (M); 12. Foreign Regional Analysis Division (SM); 13. D. H. Rahe, "U.S. Agricultural Exports Reached All-Time High of \$6.7 Billion in Fiscal Year 1965-66," For. Agr. Trade, Aug. '66 (P).

*Speech (S); published report (P); unpublished manuscript (M); special material (SM); *State publications may be obtained only by writing to the experiment station or university cited.*

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"E" Is for Excellence

At \$6.7 billion, U.S. farm exports during 1965/66 topped each of the two previous fiscal year highs by \$600 million.

Our sales for dollars came to an estimated \$5.1 billion during the fiscal year just ended, up \$700 million from 1964/65. The increase in dollar sales not only accounted for all of the gain in total U.S. agricultural exports in 1965/66 but also made up the nearly \$100-million decrease in shipments under government programs.

The three major commodities accounting for most of the gain in 1965/66 were feed grains, wheat and flour and soybeans.

Feed grains alone contributed approximately \$400 million of the \$600-million rise in our total farm exports. Shipments were a record 25.4 million metric tons, up from 17.6 million the previous fiscal year. The European Economic Community and Japan were our top customers, together taking over 14.4 million tons.

Wheat and flour exports, up \$163 million in value and 143 million bushels in quantity from 1964/65, reached an all-time high of 859 million bushels in 1965/66. Soybean exports were also record high at 257 million bushels and contributed \$136 million to last year's \$600-million gain.

Significant but smaller gains were registered for fruits, hides and skins, oilcake and meal, rice and vegetables. These gains offset much of the \$200-million loss in cotton exports during 1965/66 and smaller declines in cottonseed and soybean oils, dairy products and animal fats. (13)

THE FARM INDEX

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